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G. C. NEL: Species Novae vel Minus Cognitae:  
Lithops et Caralluma.

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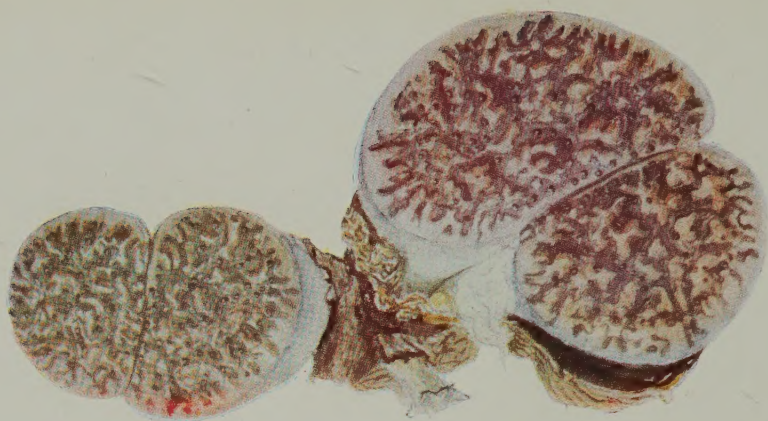
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*Lithops verruculosa* Nel

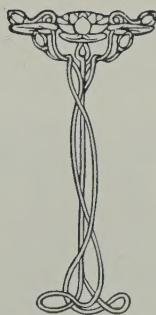


*Lithops chrysocephala* Nel

Species Novae vel Minus Cognitae:  
Lithops et Caralluma.

By

G. C. NEL



NASIONALE PERS, BPK., CAPE TOWN.  
1943.





# SPECIES NOVAE VEL MINUS COGNITAE: LITHOPS ET CARALLUMA

By  
G. C. NEL

## LITHOPS INAE Nel spec. nov.

Corpuscularia turbiniformia; folia subaequalia, convexa vel plana; supra planum insulis multis, fulvis notatum; insulae impellucidae, albidis, minutis punctis ornatae; inter insulas fenestrae confluentes; vel supra planum fulvum, fenestra vix visum, punctis multis, albidis ornata; in fenestris punctae multae, rotundae vel oblongae, subelevatae, nitidae atro-rubrae vel rubrae; margo exterior, dichotoma vel recta; margo interior recta, punctis subelevatis, nitidis multis rubris vel atro-rubris ornata; sepala 7 mm. longa, 5 mm. lata, linearia acuminata, ectus minute pellucida, griseo-virida; petala 1 cm. longa, 1 mm. lata, linearia, multa, 1-seriata, acuta, auriantico-alba; flos. diam. 2 cm.; stamina 5 mm. longa, filamenta albidia, antherae stramineae; discus inconspicuus; ovarium medio planum; stigmata 5, 4 mm. longa; capsula quinquelocularis.

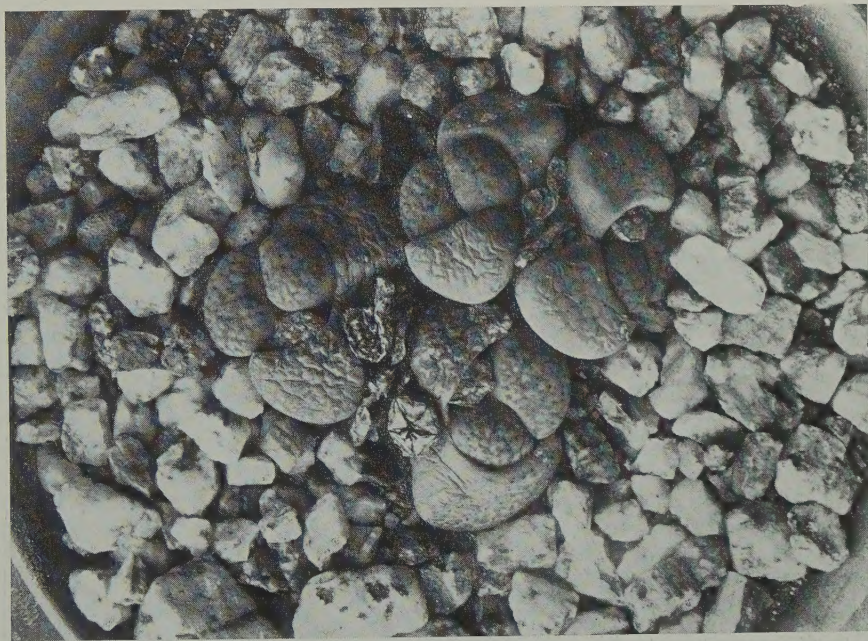


FIG. 1. — *L. Inae*.



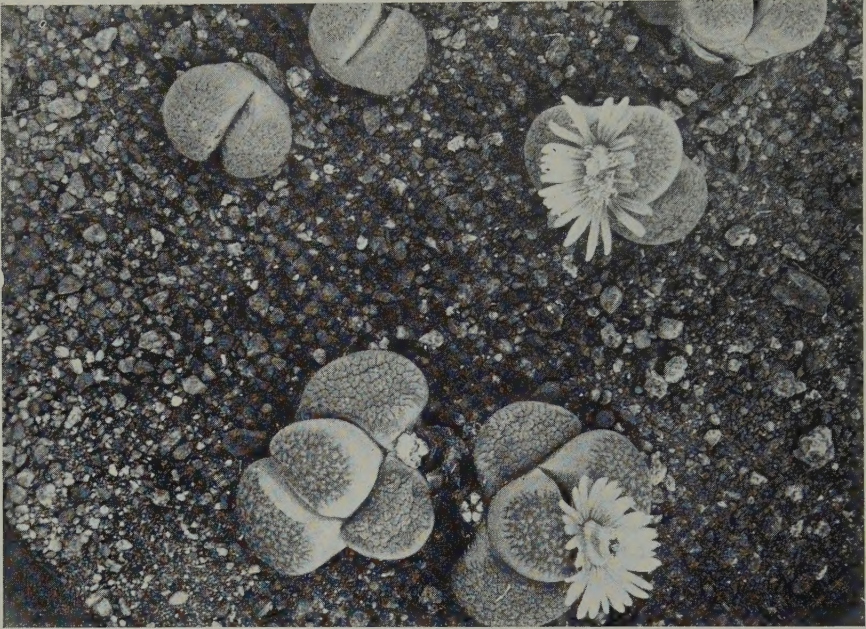


FIG. 2. — *L. Inae*.



FIG. 3. — *L. Inae*.



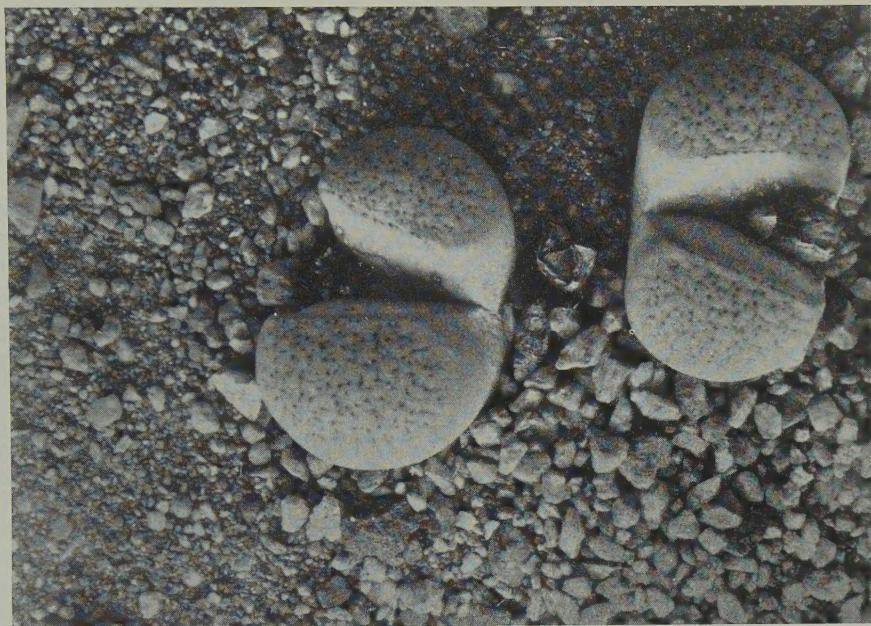


FIG. 4.—*L. Inae*.

North West Cape Province: Dr. Van der Westhuizen: Flowered 22 Feb., 1943, 5—6 p.m.; Univ. Bot. Garden, Stellenbosch.

I have named this species after Lady Ina Oppenheimer, wife of Sir Ernest Oppenheimer, for her great interest and love of the South African flora. Plant growths  $\frac{1}{2}$ —1-2 cm. long, 7 mm. broad, turbiniform; the two leaves slightly sub-equal, convex or plane; the upper surface either with a number of irregular buff coloured islands and in these islands a number of minute white dots, the transparent areas forming a confluent window or the whole upper surface buff coloured, very nearly opaque, the window being scarcely visible; in both cases the upper surface is covered with a large number of irregularly distributed slightly raised, round or oblong dark-blood red or red shiny dots, these dots just visible to the naked eye and appearing to be solid; the outer margin is formed either by the window forming branches, giving it a dichotomous appearance or the outer margin may be quite simple and straight with slight indications of the future dichotomy, inner margin straight with red or dark-red, half-raised shining dots. The colour of the flower is predominantly white but there is just a faint tinge of purple-orange in the petals. This species is related to the other redspotted or lined species, *L. Dorotheae*, *L. brevis*, *L. Dinteri*, but it differs quite distinctly from these in the peculiar deep red or blackened raised points, which so far have not been observed in any other *Lithops* species. In the case of *L. Dinteri*, *L. brevis* there is a very large open unbroken window, whereas in this species the window is either scarcely visible or is broken up into a number of confluent areas, but the main point of



difference, however, is that the red markings in the above named species are lines or dots in the tissue, whereas in *L. Inae* the red marks are raised slightly above the level of the lobe and stand out distinctly above the level of the lobes as sharp red shiny dots.

Fig. 1 shows some of the plants in their natural size, shortly after they were received. In Fig. 2 a group of the plants in the flowering stage are shown. The two types of upper surface are clearly indicated in the photograph. In the upper left flowering plant, the confluent window with the islands is distinctly visible, whereas towards the right hand corner the two plants growing together indicate the range of variability. In the latter there is no window to be seen. In Fig. 3 two plants in the flowering stage are shown magnified and here the nature of the window and the outer margin are clearly shown. It should be pointed out that very often in the flowering stage the characteristic red dots are not only not so prominent but are also far fewer in number than is the case otherwise. It seems that the number of dots are also liable to variation. The red dots tend to disappear at the flowering stage and shortly after. A loose decayed mass of tissue can very often be observed at the spot where the red dot stood. The two plants in the right-hand corner of Fig. 3 are shown magnified in Fig. 4 and the peculiar red dots are here shown quite distinctly.

The nature of the upper lobe is also indicated in the reproduction of the coloured drawing.

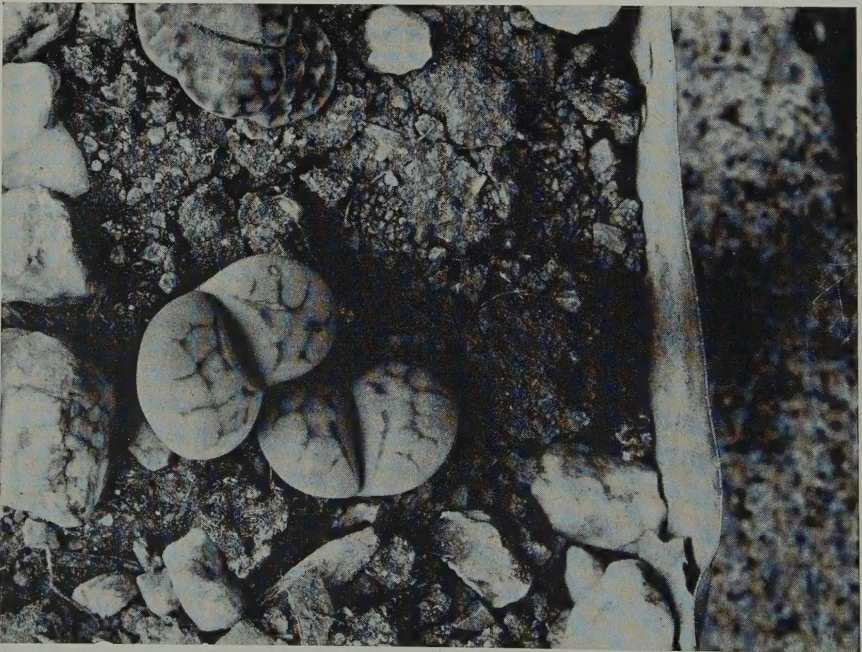


FIG. 5.— *L. chrysocephala*.



# LITHOPS CHRYSOCEPHALA Nel spec. nov.

Corpuscularia 2—2.5 cm. longa, 1—1.5 cm. lata, turbiniformia; folia aequalia vel sub-aequalia, subconvexa, pallide griseo-albida, rugulosa; fissura 1.2 cm. longa, 5 mm. lata; fenestra impellucida, intus rugulosis lineis viridibus et semipellucidis notata et in lineis sparse rubro-punctata; margo exterior simplex vel bifurcata; margo interior viridis et semipellucida, lineis punctis rubris vel atrorubris notata; flos diam. 1.2 cm.; sepala lineari-ovata, acuta, fusco-virida, 5 mm. longa, 2—3 mm. lata; petala linearia, acuta, alba, 10 mm. longa, 2 mm. lata, 1-seriata; stamina 5 mm. longa, filamenta alba, antherae fulvae; ovarium medio planum; discus crenulatus; stigmata 5, 10 mm. longa. Capsula quinquelocularis.

Uppington: Geelkop; Dry; Sept. 1939; Fl. Hort. Bot. Univ. Stellenbosch; 13 April, 1943, 5 p.m.

This *Lithops* was received from Mr. Dry of Geelkop, but the exact locality is unknown. It resembles in colour *Argyroderma testiculare*. This species is characterised by (1) an opaque light grey-white (silvery white) window and (2) dark-green transparent lines. At one stage in the life of the plant these lines seem to divide the upper lobe into 3—4 equal rectangular areas. The inner margin is dark-green and parallel; with this runs a second similar line connected with the former margin by 3—4 lines and these connecting lines divide the upper surface into 3—4 subequal areas. These two lines are about 5 mm. apart. From this second line, which passes through about the middle of the



FIG. 6. — *L. chrysocephala*.

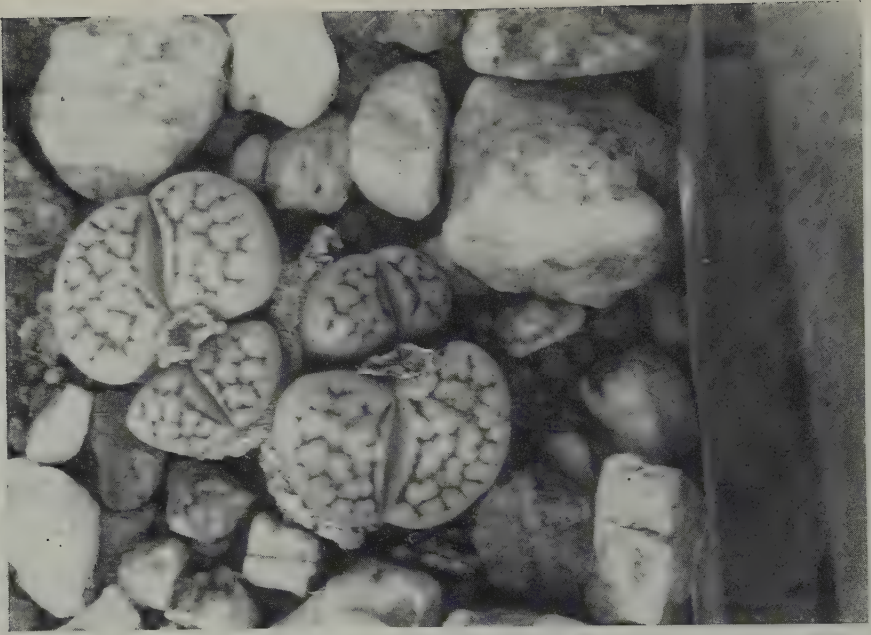


FIG. 7.—*L. chrysocephala*.

lobe, 3—4 lines run to the outer margin and end there. At the intersection of these lines transparent rectangular areas are formed and in these areas small dark-red dots embedded in the tissue or colouring the tissue are found.

As regards the above features, it appears that these characteristics are not constant. At a later stage in the life of the plant the lobes are slightly convex and the upper surface is divided into a number of areas or wrinkles, each of which is slightly raised above the level of the dividing depressions. The general appearance is thus a slightly wrinkled one. At the intersection of these lines and at other points a few dark-red dots or lines occur. The inner margin is more or less straight and in this are found a varying number of dark-red lines or dots in the tissue. The lines ending in the outer margin are either straight or slightly bifurcated. These red colourations are in the tissue. Although this plant comes ostensibly from a locality near to where *L. insularis*, *L. Bromfieldii*, *L. Mennellii* occur, yet it is a distinct species. In some respects it resembles *L. Fulleri* but the outer and inner margin of *L. Fulleri* is much more lobed and in these lobes there is a distinct dark colouration, absent in the above species. From *L. Mennellii* it differs in that the lines of *L. chrysocephala* are dark-green, those of *L. Mennellii* are black and the upper lobe is also in the case of the latter far more subdivided (Hebrew script like).

The coloured drawing shows the nature of the lobe very well. In Fig. 5 the two original plants are shown and Fig. 6 is just the plants of Fig. 5 but magnified. These two photographs show clearly the nature of the lobe at one stage in the life of the plant. In Fig. 7 two young plantgrowths have



appeared between the two original plants. This photo shows the difference between the markings of the lobes at one stage in the life of the plant and a later one, if one compares this photo with Fig. 5 and 6. These photographs and those of *L. Inae* show quite conclusively that great care has to be exercised in making use of the markings of the lobes, as these markings are very liable to variation. It is not sufficient to make an accurate drawing of only one lobe and from that fix the characters of the species. These lobes are after all leaves and it is a matter of experience that leaves show a great deal of variation. In determining the characters of the species this must be borne in mind.

## LITHOPS VERRUCULOSA Nel spec. nov.

*Corpuscularia turbiniformia*; folia aequalia vel subaequalia, subplana vel leviter convexa; fenestra nihil; superne rugosa, coeruleo-grisea, inter rugas multis, minutis atro-griseis verrucis notata; margo exterior et interior liniis notatae; capsula quinquelocularis.



FIG. 8. — *L. verruculosa*.

North West Cape: Dr. Van der Westhuizen, Sept., 1939.

Plant growth 2—3 cm. high, turbiniform, lobes slightly convex or plane; two lobes subequal; upper surface without a distinct window, opaque, irregularly divided by a number of confluent depressions, giving the whole a wrinkled or tuberculated appearance, like that of *L. turbiniformis*, bluish-grey; in the depressions a very large number of minute dark-grey warts; outer and inner margins



FIG. 9. — *L. verruculosa*.



FIG. 10. — *L. verruculosa*.



with lines. This is undoubtedly a very distinct species, related to *L. turbiniformis*. At first glance one would think you have *L. turbiniformis* before you, but this species differs from it in two very important respects, viz., (i) this species is of a bluish-grey colour, whereas *L. turbiniformis* is rust brown or at least of a reddish tint colouration; (ii) in between the tubercles or wrinkles there are depressions and here are found the minute dark-grey warts, a feature not observed so far in any other *Lithops* species and characteristic of this species. These minute warts are distinctly seen under a magnifying lens of ten diameters or very slightly with the naked eye. The plants are shown in Fig. 8. This photograph was taken shortly after they were received and it shows them about their natural size. Fig. 9 taken with an ordinary camera gives us an idea of the wrinkles and the colour of the plant. Here a few of the lobes are shown somewhat magnified.

Fig. 10 is an instructive photograph of one of the lobes of *L. verruculosa*. This was taken with a Leitz Panphot, using an objective Milar 100 mm. This photograph shows the convolutions quite clearly and in these depressions the small warts are at some points visible.

## LITHOPS GEYERI Nel spec. nov.

*Corpuscularia turbiniformia*; folia subaequalia vel aequalia, superne convexa; fenestra magna et bene visa, pellucida, olivaceo-viridis, vel multis insulis, albidis, elevatis notata; margo exterior irregulariter dentata, laciniae multae, obtusae

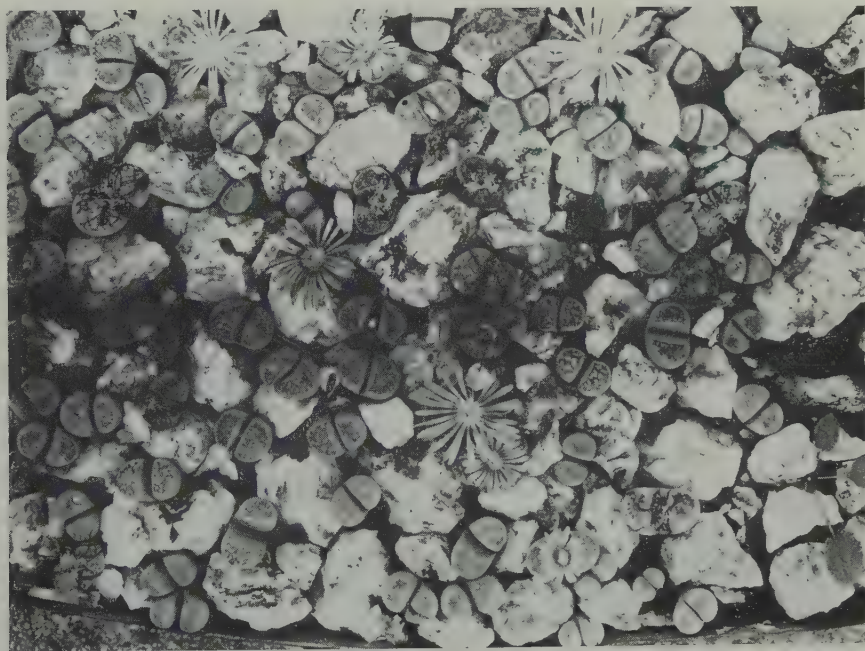


FIG. 11. — *L. Geyeri*.



FIG. 12. — *L. Geyeri*.



FIG. 13. — *L. Geyeri*.



vel acutae, lineariae vel minute dentata; margo interior plana; flos. diam. 2.8—3 cm. diam.; petala 1.1 longa, 1—3 mm. lata, linearia, obtusa, lutea.

Namaqualand: Katberg; H. Herre, Sept., 1939. Flow. Hort. Bot. Univ. Stellenbosch.

Growth .5—1 cm. high, .8—1.2 cm. broad, fissure .5—1 cm. long; upper surface slightly oblique convex, window large and open of a green olivaceous colour, transparent in the window a large number of whitish isolated irregularly shaped islands. Inner margin is more or less straight, the outer margin laciniated or minutely denticulate. This species is characterised by the large flower and the relatively small body.

In Fig. 11 the range of the variation of the markings of the upper lobe in *L. Geyeri* is shown and further the relative size of the flowers to the lobes is also indicated. This species is characterised by the very large flower and differs in this respect from the other *Lithops* species such as *L. diutina*. Fig. 12 is more or less the natural size of the plants, whereas Fig. 13 shows us the flower slightly magnified. I have named this plant after Dr. A. L. Geyer, to whom I am indebted for very many *Lithops* species and for information about their occurrence in South West Africa.

## LITHOPS GRACILIDELINEATA DINTER

Sepala .8 mm. longa, 2—3 mm. lata, linearia, obtusa; petala 1.4 cm. longa, 2 mm. lata, linearia-lanceolata, obtusa, 2-seriata, lutea; stamina .8 mm. longa,

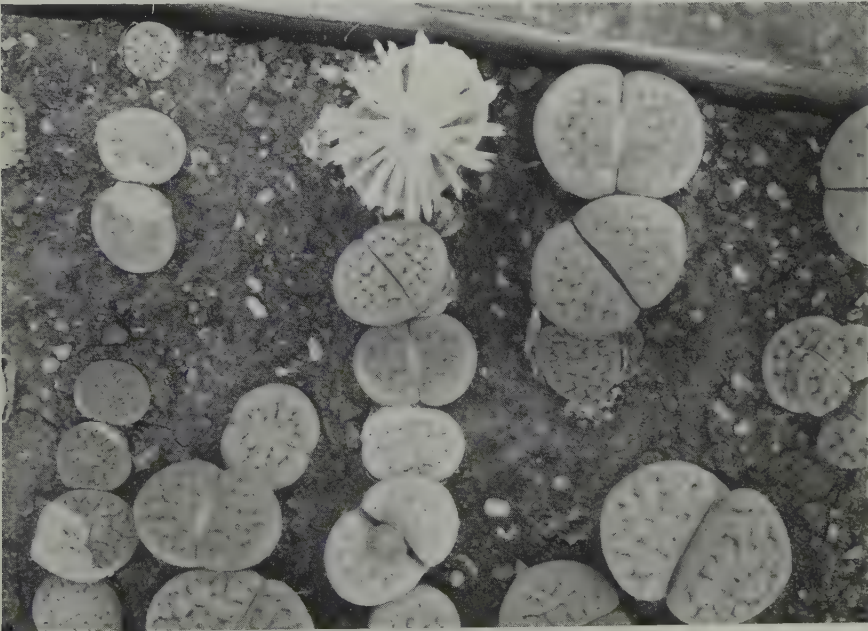


FIG. 14.—*L. gracilidelineata*.

filamenta alba, anthereis luteis; flos diam. 3—3.2 cm.; discus crenulatus, ovarium medio planum. Fl. Mart. 1940.

## LITHOPS KUIBISENSIS DINTER ex Jacobsen, Die Sukkulente, p. 147, 1933.

There seems to be some doubt about the validity of the name *Lithops kuibensis*, as the plant was never adequately described by Dinter. Jacobsen in his "Succulent Plants"—I have not the German original, "Die Sukkulente", before me—enumerates the plant as *L. kuibensis* Dinter, but so far I have failed to find where Dinter actually described the plant. Jacobsen himself does not indicate in what journal or book the plant was described but proceeds to give a short description. It appears to me to be desirable to retain this name in order to avoid confusion. In order to regularise matters as far as the nomenclature is concerned the name must be retained as follows: *Lithops kuibensis* Dtr., ex Jacobsen, Die Sukkulente, p. 147 (1933).



FIG. 15. — *L. Kuibensis*.

Dinter in Südwestafrikanische Lithopsarten (R. Graesner, Perleberg, 1928), described a plant under the name *L. Schwantesii*, which may on further examination and investigation prove to be identical with *L. kuibensis*, and in that case the latter name would be a synonym of the former. In the meantime until matters have been cleared up, it would be wise to retain the name *L. kuibensis*.



Fig. 15 gives us an idea of the appearance of the upper lobes. This plant flowered in March and the flower was of a shiny deep yellow colour. The whole question of the relation of the species *L. kuibisensis*, *L. Triebneri* and *L. Schwantesii* requires careful investigation.

## CARALLUMA ERICETA Nel spec. nov.

Caules carnosi, caespitiosi, tetragoni, glabri; Costae prominentes, mammilosa, spini purpureo-albidi. Flores bini in parte vertice ramorum et inter costas erumpentes, pedicellati; pedicelli subrotundi. Bractee minutae, filiformes. Sepala lanceolato-delloidea, acuta. Petala linearia, acuta, inflexa, ectus glabra, unicostata, basin versus lutea, margine purpureo-punctata, in parte medio atropurpurea, apicem versus lutea, sed leviter purpureo, intus ad basin lutea, transverse sed leviter suberecta, fusco-purpureo-lineata, ad apicem lutea, margo

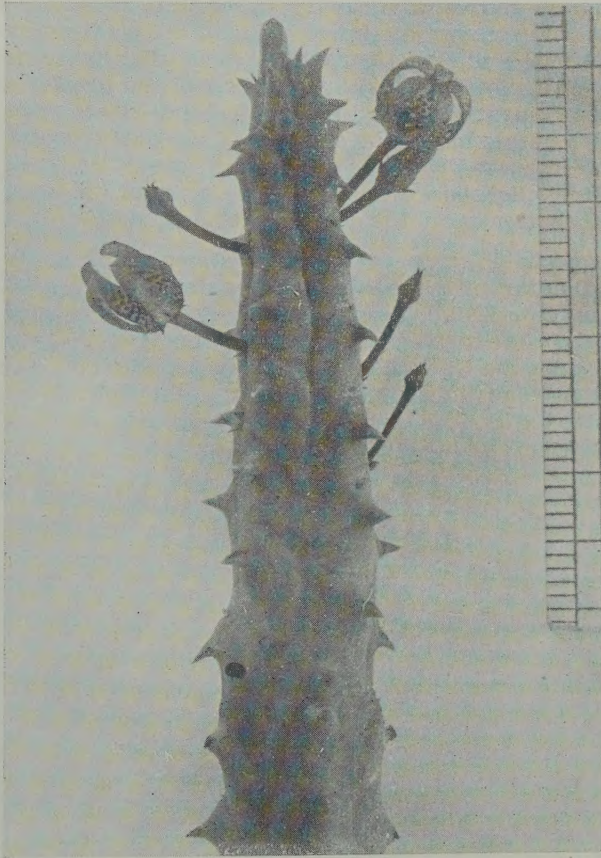


FIG. 16. — *Caralluma ericeta*.

petalorum purpurea, sparse in medio parte pilis, hispidis fusco-purpureis munita; corona exterioris segmenta, oblonga, bicornuta, purpurea, ad basin lutea; corona interioris segmenta oblonga, lobi subulati, arcuato-divaricati, antheris incumbentia, obtusa vel emarginata, non longiora antheris.

Oudtshoorn: Flowered, Bot. Garden, Stellenbosch, April, 1943; J. L. de B. van der Merwe.

Stems erect, 4 cm. high, 7 mm. long, glabrous, acutely 4-angled, the angles toothed, teeth with short subulate spines. Flowers 2, arising in the angles between the ribs, towards the upper part of the stem. Bud 5—7 mm. long, about 2 mm. broad, distinctly purplish in colour. Pedicel terete, 7 mm. long, Sepals lanceolate-deltoid, acute, 2 mm. long; petals 6—7 mm. long, 2 mm. broad, linear, acute, incurved to meet above the centre of the flower but the tips free, the outer part of the petal is so to say divided into three more or less distinct differently coloured parts, the whole outer part is basically yellow, the lower third is coloured purple along the edges and on the prominent midrib, the middle part is predominantly purple, whereas the upper third is mainly yellow but with a very faint purplish overtone; the interior side of the petal shows a predominant yellow lower half with distinct transverse, some slightly turned towards the apex, brown-purple narrow bands, the upper half of the petal is distinctly yellow with no purple markings; the margin of the petal is armed with a few straight stiff needle-shaped purple hairs; the segment of the outer corona oblong, divided into two subulate arcuate-divaricate horns and longer than the inner corona, dark-purple with a yellow base 1 mm. long; segments of inner corona incumbent on the stamens, shorter than the stamens, oblong, dark-purple.

*Caralluma ericeta* is very near to *Caralluma dependens* (illustrated in Hooker's *Icones Plantarum*, Plate 1903.) The outer corone of these two plants are identical, but *C. ericeta* differs from *C. dependens* in that the pedicel is much shorter than that of this new species. Furthermore this species is very sparsely ciliated, whereas *C. dependens* is profusely ciliated. The upper half of the petal of *C. dependens* is coloured dark purple-brown and that of *C. ericeta* is of a light green-yellow colour. The flowers of *C. dependens* are pendulous and those of *C. ericeta*, as can be clearly seen from the accompanying photograph, are erect.

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*I am indebted to Mrs. Evelyn Crämer, Sea Point, for the painstaking care she has taken in the preparation of the coloured drawings reproduced here. It is no easy matter to get as near as possible to the elusive colours of the lobes and at the same time indicate the minute details sometime present in the lobes of these interesting plants.*

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Lithops Inae Nel



Lithops Geyeri Nel

